

REMARKS

ON

SPINAL IRRITATION

AS CONNECTED WITH

NERVOUS DISEASES,

WITH CASES.

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REMARKS

ON

SPINAL IRRITATION, &c.

IN some late investigations on the obscure subject of nervous pathology, instituted by several eminent practitioners of Great Britain, an opinion has been advanced, and urged with considerable authority, that many chronic nervous disorders have a local and determinate seat in some portion of the spinal marrow or great sympathetic ganglia, and hence that these obstinate diseases are most effectually treated by applications directed to the spinal column.

I propose, in the present paper, briefly to notice some of the facts and arguments upon which this conclusion is founded, together with the pathological principles which it involves, and their application to the diagnosis and treatment of this extensive and obscure class of diseases. I shall then endeavour to illustrate the several points embraced in the inquiry by narrating cases, most of which have fallen under my own observation while fulfilling the duties of resident student in the Philadelphia Alms-house Infirmary.

In adverting to the obvious and acknowledged ignorance which prevails in relation to the nature of most maladies, which are supposed to reside solely in the nervous apparatus, and in considering the immense amount of moral and physical distress which they produce, every one must most seriously desire the establishment of some definite principles on which their treatment may be conducted.

Believing that the present vague and unintelligible notions on the pathology of neuralgic diseases, have arisen from the obscurity in which the normal functions of the nervous system have always been involved, it may be proper briefly to advert to late physiological discoveries, which may admit of an important application in elucidating pathological phenomena.

It is only within a few years that the united efforts of BICHAT, BELL, MAGENDIE, RIEL, PHILIP, and others, aided by experimental

inquiry, and enlightened discrimination, have amassed a body of facts, the development of which has dispelled much former obscurity, and promise, if still pursued, to lead to most interesting results.

These authors have taught us to consider the nervous system not as a homogeneous tissue, possessing an identity of structure and function, and having for its only centre the *brain*, (an opinion for a long time entertained,) but as composed of separate parts, differing essentially from each other, both in their functional actions, and anatomical characters. Thus, to the brain and the nerves proceeding from it, have been assigned one set of actions; to the spinal marrow and its branches another; and to the sympathetic nerve and its tributaries a third.

Adopting this division as the basis of all correct pathological deductions, it is to be hoped that future investigations on the nature and seat of many nervous affections will assume a much more certain and satisfactory form. The credit of first commencing such a series of observations in reference to neuralgic diseases, is perhaps due to the English practitioners alluded to; the observations upon which their deductions are founded, I shall endeavour summarily to state.

In the year 1821 a short essay was published by Dr. R. P. PLAYER, in which he called the attention of the profession to a connexion between spinal disease and neuralgic symptoms manifested in different portions of the body; this fact he was enabled to state from having for several years observed that tenderness on pressure over the spinal column, in a situation corresponding to the origin of the diseased nervous cords, was almost uniformly present; he further stated that he had long been accustomed to treat such cases by topical applications over the tender portion of the column, and that the uniform success of this practice had confirmed him in the opinion that the cases alluded to had their origin in the spinal marrow.

The essay of Dr. Player excited but little attention until the year 1828, when his views were abundantly confirmed by Dr. BROWN, of Glasgow, in a paper which he published on "irritation of the spinal nerves." During the next year, in a highly instructive essay, entitled "observations on some forms of spinal and cerebral irritation," similar opinions were advanced by Dr. DARWALL, who was followed by Drs. TEALE and TATE, the former in a treatise on neuralgia, published in 1830, and the latter in a work on hysteria, which appeared about the same time.

All these authors have insisted on the fact, that tenderness on

pressure over some portion of the spinal column, is an attendant and prominent symptom in most chronic nervous complaints, and that a removal of this tenderness by appropriate external applications, constitutes the most important indication in the treatment of the accompanying nervous symptoms. For the truth of this assertion each author appeals to his own experience, and enforces the opinion by many well selected cases; all of which is considered by Teale as sufficiently conclusive to establish the following pathological axiom, viz. "that disease in the large nervous masses, as the brain and spinal marrow, is not so much evinced by phenomena in the immediate seat of the irritation, as in those remote parts to which the nerves arising from the diseased portion are distributed." This principle is supposed to be applicable to a very extensive class of nervous affections, all of which Dr Teale has proposed to designate by the general term of neuralgia, comprehending in this view not only those manifest affections of the nervous filaments characterized by pain, but many other conditions indicating an altered and perverted state of their healthy actions.

In thus assigning to this numerous and perplexing catalogue of diseases, a local and uniform situation, we are still uninformed as to the precise pathological condition which originates them, nor has it been explained in what manner tenderness on pressure should reveal the condition of parts, so firmly secured by bony and ligamentous attachments; if the fact be established, however, it is reasonable to infer the existence of some morbid condition, which, in the present uncertainty of our knowledge, may perhaps be appropriately designated by the term spinal irritation, or, as the same idea has been differently expressed, by "functional disorder of the spinal marrow."

If the preceding physiological and pathological views be correct, a most important change will be effected in the classification, diagnosis and treatment of the various modifications of disordered nervous action so frequently presented to the practitioner. These affections now designated by numerous unmeaning appellations, and described with nosological minuteness, will be comprehended under one general division, be distinguished by a few well-marked and prominent symptoms, and treated on plain and comparatively certain principles.

Considering the spinal marrow as the great centre for sensation and motion, the materials of which it distributes through its compound nerves to those parts subservient to the will, we should expect to witness various spasmodic or painful affections of the voluntary

muscles, occurring as a consequence of its primary or secondary disorder. Believing with the distinguished Sir CHARLES BELL that the fifth nerve possesses an identity of structure and function with the spinal nerves, though arising in the most superior portion of the column, irritation at its root would account for various perplexing irregularities in the sensations and movements of some of the muscles of the face to which it is so liberally supplied. Applying the same train of reasoning to similar affections of other portions of the economy dependent for their nervous power on the same great centre, we should expect to find them equally intelligible.

A still more important light in which the principle now under consideration may be examined, is in connexion with the intricate morbid actions, presumed to occur in the ganglionic system. Contemplating the sympathetic ganglia as the seat of the nervous influence by which the functions of the internal and vital organs are sustained—as presiding over the movements of the involuntary muscles—as exercising an obvious though inexplicable agency over the process of secretion, and the circulation of the vital fluid—we may hope in the progress of inquiry for the development of facts, that will dispel some of the obscurity at least, which is connected with a very extensive class of chronic functional disorders of internal organs, which, from their recondite nature, have defied the rigid scrutiny of the most renowned and successful cultivators of our science. The existence of spinal irritation in the diseases I have adverted to, is supposed to be evinced by spinal tenderness; this symptom being not only indicative of irritation in the spinal marrow, but also in the sympathetic ganglia; an inference drawn from the well ascertained anatomical connexions and physiological relations existing between these great centres.

Before adopting to the full extent the preceding opinions, it may be well to inquire, whether it is not possible for the trunks of nerves to be obviously and even violently affected with disease, without their centres or points of origin being in any degree implicated? It is to be regretted that this question has not been more critically examined by the several writers on spinal irritation, particularly as its consideration is so intimately associated with the adoption of their peculiar opinions. Dr. Darwall dismisses it by remarking that we have no evidence of the existence of diseases in the trunks independent of the centres, while he conceives that there is convincing proof of irritation in the centres giving rise to morbid influences in the parts which they respectively supply. If tenderness on pressure be alone indicative

of irritation in the spinal marrow or sympathetic ganglia, (and as far as I am aware this alone is to be relied on,) I am compelled to dissent from the proposition of Dr. Darwall, having witnessed several cases of neuralgia characterized by most unequivocal symptoms, in which on the most careful and repeated examinations, no tenderness could be discovered, and similar cases have been mentioned to me by physicians of accurate and extensive observation. Such occurrences should create caution in the exclusive adoption of opinions, though they may be sanctioned by the general tenor of observation.

Irritation of the nervous centres with their accompanying symptoms, may either occur, as an idiopathic affection, or may arise from a previous derangement in the functions of some organ or organs; thus an irritation may be primarily induced in the dental, gastric, or uterine surfaces, which by its continuance will be extended to the nervous masses, and thence be transmitted to distant parts; this position is exemplified by the fact of a decayed tooth being the cause of the most severe and protracted nervous complaints; or by referring to the complicated and distressing affections, passing under the names of hypochondriasis, melancholia, &c. which have obviously depended on a perverted action of the mucous surface of the alimentary canal; or by adverting to the anomalous and protean forms of disorder in young females lately so accurately traced to uterine irritation. The practical importance of this distinction between idiopathic and symptomatic spinal irritation will be more particularly noticed hereafter.

Before proceeding further, it may be proper to advert to some late highly interesting observations on the *peculiar* neuralgic affections of females, as described by Dr. Tate of London; this gentleman after an enlarged experience, has not hesitated to publish the opinion, that the appalling and anomalous symptoms presented in the hysterical female, are all capable of being referred to an irritation existing in some portion of the spinal marrow, originally induced by a disordered condition of the uterine function. He was led to this conclusion by observing, that tenderness on pressure over the spinal column, was a uniform attendant and characteristic feature of these complaints, connected almost uniformly with *pain under the left breast*, and palpitation of the heart. These four symptoms, viz. disordered menstruation—spinal tenderness, most generally evident over the upper dorsal vertebræ—*pain under the left mamma*, and sometimes under the right—and palpitation of the heart, may be distinguished among a multitude of frightful appearances in almost all cases of chronic nervous disorder.

der in young females, and when they are conspicuous Dr. Tate considers them as characterizing a peculiar and distinct disease, which, to avoid confusion, he has proposed to call hysteria.

Without entering into a detail of the process by which Dr. Tate has arrived at this conclusion, I shall merely state the result of my own observations in reference to his peculiar opinions.

While practising in the Alms-house, I had frequent opportunities of examining cases similar to those described by Tate; some of these were of long duration, and of most intractable character; in all of them my attention was directed to the discovery of these symptoms, which I have almost invariably found to be prominent features in the case; the pain under the left breast is particularly striking, and should alone lead us to suspect the character of the case. The importance of establishing a few diagnostic symptoms, whereby these perplexing cases may be recognised, is sufficiently obvious. More enlarged experience must determine whether those mentioned by Dr. Tate are to be relied on.

By reviewing the preceding observations, it will be perceived that, (according to late writers on spinal irritation, an outline of whose opinions I have attempted to present,) by a disorder in the normal actions of some portion or the whole of the spinal marrow and sympathetic ganglia, either occurring primarily or induced by some pre-existing irritation, symptoms are manifested in different tissues, producing diseases distinguished by numerous appellations, though usually described by nosologists under the class neuroses; and further, that all these complaints are susceptible of being reduced to the two terms of neuralgia and hysteria, the former being applicable to them as occurring in males, and the latter in females.

The introduction of such a system of generalization is, indeed, a bold innovation upon general usage, and established authorities, while its adoption, founded on the firm basis of fact and observation, would form a very important epoch in the history of practical medicine; it has, however, yet to undergo the ordeal of a sound and discriminating experience.

There is still another light in which morbid derangements of the nervous centres may be viewed with peculiar interest, viz. in connexion with the complicated symptoms of fever.

When we contemplate the wide range of sympathies, in the production of which the great sympathetic nerve is supposed to be the sole agent, and the influence which it must exercise in the production and maintenance of all general or constitutional diseases, we cannot

fail to admit its great importance in pathological investigations. That its normal functions are materially deranged in fever, no one can doubt, who reflects on its primary symptoms, paroxysmal nature, the disturbance of the circulation, the depravation of the secretions, &c. Some very interesting observations, tending to elucidate such a connexion, have lately been published by Dr. GRIFFIN, an experienced practitioner of Limerick. These observations were confined principally to cases of chronic intermittent fever, many of which fell under his care in the practice of a large public dispensary; he reports many cases, in which, being unable to effect a cure by the ordinary tonic remedies, he was induced to examine the spinal column, which was invariably found exquisitely tender in some part of its course, in relieving which, by the ordinary revulsive applications, he declares that his success has been highly satisfactory. Dr. Griffin supposes, that the spinal marrow and sympathetic nerve are simultaneously disordered in these cases, and he designates this peculiar pathological condition by the term functional disorder of the spinal marrow.

It now remains for me to indicate the principles of treatment, founded on the foregoing considerations, and the circumstances under which they may be most advantageously applied. Being called to a case, and having ascertained the existence of spinal tenderness, of general nervous derangement, &c. our inquiries should be directed to the original cause of the attack, which will usually be found to exist in some functional disturbance of one or more of the internal organs. Under such circumstances, two prominent indications are presented—first, to remove spinal tenderness; and secondly, to correct the existing disturbances in the functions of important organs. The importance of this precept is evident, for though we may remove spinal tenderness, and thus terminate for a time the neuralgic symptoms, yet if the primary irritation be suffered to continue, their renewal on the application of slight causes may be reasonably apprehended; and conversely, if by appropriate means we should correct the primary disordered action, which has, through the channel of the nervous centres, produced such general derangement, without at the same time by revulsive measures, relieving these irritated points, our efforts would be alike unavailing.

I wish particularly to notice the external applications proposed for the relief of spinal tenderness; the other part of the treatment, though equally important, admits of too many modifications as applicable to a great variety of cases, to allow me to enter into their examination—some of them may be collected from the cases mentioned hereafter.

The means chiefly relied upon for the removal of spinal tenderness, are of three kinds, viz. local depletion by cups or leeches to the affected part, blistering either prior or subsequently to local depletion, and the application of the tart. emetic, until its peculiar effects are produced. Local depletion has been strongly recommended by nearly all the authorities, and particularly by Teale, who states—that he has, by frequent cupping or leeching to the tender part, relieved the neuralgic symptoms, without the necessity of resorting to additional revulsive measures. Tate, on the contrary, discards both local depletion, and blistering—considering them quite ineffectual, and relies solely on the more powerful and permanent impression produced by the tartar emetic.

Such a diversity of opinion on so important a practical point may, at first view, appear irreconcilable, but I apprehend it may be satisfactorily explained by referring to the general character of the cases as described by these writers. In the more simple forms of neuralgia, where the spinal irritation is either an idiopathic affection, or has been induced by slight causes, and where the general system has not become seriously implicated, (conditions connected with the generality of cases noticed by Teale and several other writers,) local depletion and blistering, either alone or combined, will generally be found effectual, though in many, even of these cases, a long perseverance in this plan will be demanded.

In the hysterical forms of the complaint supposed by Dr. Tate to be originally dependent on uterine disorder, in which from the neglect, (arising perhaps from the supposed triviality of the symptoms,) the nervous functions have become deeply and generally impaired, the applications must be proportionably active, and it is under these circumstances that the tartar emetic from its powerful and permanent action is peculiarly appropriate.

In the use of this irritant, however, considerable caution should be observed, particularly if it be applied over an extensive surface; in some individuals who either from natural predisposition, or from the protracted operation of disease, have acquired a peculiarly sensitive temperament, it cannot be endured; several instances have fallen under my notice in which the most severe constitutional irritation has accompanied its use,* and in one case a violent and alarming convulsion appeared to be produced by it: should a part of the spine be

* I believe it will generally be found that the nervous symptoms are increased as the pustulation advances, and that they diminish as it declines.

extremely tender, as is often the case, the ointment or plaster should be applied in its vicinity; this remark will also apply to cups or blisters.

Several methods of applying the tartar emetic have been proposed; the ointment composed of tart. emet. $\mathfrak{z}\text{ij.}$, cerat. simp. $\mathfrak{z}\text{j.}$ I have often found ineffectual, owing I presume to the small quantity of the active ingredient in its composition—the plaster made by sprinkling the crystals on common sticking plaster softened by heat, is perhaps the best mode of application. In the employment of either of these modes, I have found a great difference in its action upon individuals, in some patients an eruption may be induced in twenty-four hours, while in others several days are required to produce a similar effect. The pustules are generally so painful, as to require that mild opiates should be occasionally administered during their course; should the irritation threaten serious consequences, soothing applications should be resorted to. I have found the mucilage of slippery elm, to be particularly useful.

Where the case is not sufficiently severe to justify the employment of either of the preceding applications, or where from the suddenness of the attack, it is desirable to produce a speedy impression in the vicinity of the spinal marrow, frictions down the spine with spt. terebinth. either alone or diluted with some unctuous matter, or a decoction of capsicum in brandy, with other similar articles will be found highly beneficial. This practice has long been advantageously employed in the treatment of the convulsions, and other spasmodic affections of children.

Before closing these remarks on the application of revulsives to the spinal column, it may be proper to inquire, whether we are to restrict our employment of such means, to those cases only in which spinal tenderness is evident. If such a practice be applicable to all cases of “nervous disease,” and if it be proved that such cases do exist independent of an irritation in the spinal marrow, (an opinion highly probable,) the conclusion is obvious. I am disposed however to carry the application of revulsives to the spinal marrow much further, extending the practice to most chronic local disorders, where it is desirable to procure a revulsive action, as for instance, in chronic inflammation of the eye, Schneiderian membrane, &c. &c.

If it be true that the establishment of an irritation in one part, tends to relieve a preëxisting morbid action in another, by abstracting from it that superabundant portion of nervous influence by which its morbid processes are sustained, is it not rational to infer that the nearer such counter-irritation be applied to the great reservoirs of

nervous power, the more permanent and effectual will be its operation?

Having now endeavoured to delineate the leading features embraced in the doctrine of spinal irritation as connected with nervous or neuralgic diseases, it remains for me to narrate such cases as may tend to illustrate the several principles advanced. In doing this, I must acknowledge the kindness of several of my colleagues in the Alms-house, who have always been disposed to render me their assistance in investigating this interesting subject.

The following case presents an example of one of the most simple and ordinary forms of neuralgia, referable to irritation in the upper or cervical portion of the spinal marrow.

CASE I.—Mary Bancraft, aged about forty years, of robust frame and plethoric temperament, applied to me concerning an unpleasant complaint, which had troubled her for more than a year; her symptoms were pain and stiffness in the back of the neck, increased by revolving the head, with occasional severe shooting pains in the neck, breast and occiput, often extending down the upper extremities to the ends of the fingers and sometimes causing a complete obliteration of feeling in these parts, so that she was often unable to hold her needle, or pursue any occupation for several days; general health unimpaired, has undergone no medical treatment except being often bled, which usually afforded temporary relief.

On examining the spinal column, I found acute tenderness on pressure over the cervical vertebræ, and on firm pressure she cried out, with severe shooting pains, extending to the ends of the fingers.

3d Month 27th.—Six cups were applied over the tender part, followed by a blister, which was kept discharging for several days; during this time the shooting pains had entirely ceased; the blister being allowed to heal, her feelings were much improved, and she could use her needle with facility. I frequently saw her after this time, and found that she remained free from her former attacks.

The following cases differ from the preceding in the neuralgic pains being in the lower extremities, and the spinal tenderness in the lower portion of the column; it will be observed, however, that in Case III. no spinal tenderness could be discovered, though the beneficial effect of applications over the origin of the affected nerves was most strikingly evinced.

CASE II.—Mary Ann Ledden, aged nineteen, of delicate, nervous temperament, admitted 12th Mo. 4th, 1832. Her symptoms were severe

shooting pain in the lower limbs, unattended with increased heat or tumefaction in the part, and without much constitutional disturbance. She had been treated for rheumatism by the ordinary antiphlogistic measures which seemed rather to increase her sufferings. At the time I saw her she was confined to the bed, being unable to move her lower limbs, without experiencing acute pain. On examining the spinal column, I found most acute tenderness on pressure over the lower dorsal vertebræ, shooting pain through the limbs being induced by the examination. Cups were directed to the affected part, which were in a few hours followed by a blister, to be dressed with stimulating ointment. Under this treatment she improved rapidly; in a few days the blister was allowed to heal, and on the 18th, she was free from complaint.

CASE III.—Jane Beck, aged thirty-one years, was admitted into the infirmary, 9th Mo. 17th, 1831. She stated, that about a year since, she became “irregular,” since which time she has been “nervous,” and subject to violent paroxysms of pain in the limbs, occurring with great severity at her accustomed menstrual period; during the last few weeks her complaint has been rapidly advancing, and at the time of her admission, her lower extremities were so completely powerless, that she was unable to change her position in bed without assistance. These symptoms were unaccompanied with any febrile movement, or other evidence of constitutional disorder. The spinal column was carefully examined, but no tenderness could be discovered at any point. Free depletion by cups from the lumbar region was alone directed.

18th. No change in symptoms.

19th. The cupping was repeated in the morning, and produced striking and speedy relief.

20th. Was so much improved as to be able to rise without assistance; and in a few days she recovered the accustomed use of her limbs; no return of the paralysis took place, though she suffered for several months with nervous symptoms dependent on amenorrhœa, of which she was finally relieved by a restoration of the healthy uterine functions. For a knowledge of this interesting case, I am indebted to my friend, Dr. A. S. HILL, under whose care it occurred.

For the following case I am indebted to my friend, Dr. A. A. WOODHULL.

CASE IV.—Rebecca Jones, aged fifty-one, admitted into the women’s medical ward, 11th Mo. 15th, 1831. She informed me that she

had been for a long time a sufferer from a severe shooting pain in the left thigh, which, from examination, I found to follow the course of the great ischiatic nerve. So severe was the soreness in the muscles of the thigh, as to oblige her to use a crutch in walking, and sometimes to confine her entirely—general health unimpaired—states that much has been done for her; she has been repeatedly cupped and blistered on the limb, with slight temporary relief. Spinal column acutely sensible from the lower dorsal to the last lumbar vertebra; firm pressure causing severe shooting pain down the limb. On the day of admission a blister was directed over the tender part.

17th. The blister has drawn well, and produced most striking relief. She is entirely free from her accustomed pain—blister allowed to heal.

25th. Walks about without any assistance; has had no return of pain—no spinal tenderness.

12th Month 12th. Discharged.

The effect of treatment directed to the spinal column in relieving chronic nervous pains attacking different parts, and usually designated and treated as rheumatic, is most satisfactorily evinced in the following case, which, through the kindness of my friend, Dr. Woodhull, fell under my notice during the last winter.

CASE V.—William Davies, a coloured man, aged thirty-three years, admitted into the Alms-house, 12th Mo. 6th, 1831. Stated that for the last year, he has been confined with “rheumatism,” which has been so general and severe as to prevent him from pursuing any occupation. During the greater part of this time he has been in the Alms-house of the county in which he resided, and has there undergone a great variety of medical treatment; “has taken a great many drops of different kinds,” and has been repeatedly cupped and blistered over painful parts; had at the time of his admission several issue peas in his arm, which had been kept discharging for a long time. Notwithstanding this treatment, his disease remained stationary, on which account he was induced to come to Philadelphia. At the time of his admission into the house, he was unable to walk without great pain, and his general health was much impaired from long confinement.

The spinal column was found acutely sensible throughout its whole course, and by pressure at particular points, shooting pain was induced in the course of the nervous chords; bowels constipated; tongue furred; pulse pretty full and active. Directed a brisk cathartic to be administered in the evening; and cups to be applied from the neck to the sacrum.

27th. The medicine operated freely, and the cups had abstracted about $\frac{3}{4}$ xii. of blood; expresses himself very much relieved, having had a longer respite from pain than at any time for the last year. Slept well during the night, and is able to move the limbs freely. With a view of more completely acting upon the disease, a blister was applied down the spine—after the operation of which, he was able to walk about, and was completely restored to his former health.

The following presents a more complicated and lengthened train of symptoms, probably dependent on an irritation, both of the spinal marrow and sympathetic ganglia.

CASE VI.—Martha Garwood, aged thirty-seven years, a valuable nurse attached to the Alms-house, was attacked during the last summer with dysentery, which assumed a chronic form, and obliged her to submit to a strict medical treatment for several months. In the autumn, the dysenteric symptoms had completely subsided, though her general health was much impaired. She was frequently attacked with severe spasmodic pains in the stomach and bowels, sometimes with dyspnoea, resembling a paroxysm of asthma, together with violent neuralgic pains in the breasts, head, shoulders, &c.; appetite and digestion impaired, tongue thickly coated, pulse feeble and frequent, catamenia regular, spirits depressed—is much emaciated, and has almost despaired of recovery—her nervous symptoms have been very violent for several weeks, and a great variety of remedies have been ineffectually employed for their relief.

10th Month 24th, 1831.—On examining the spinal column, acute tenderness on pressure was particularly obvious between the fourth and fifth dorsal vertebræ, extending in a greater or less degree to the lower part of the back; on making firm pressure at the most sensitive part, the stomach was immediately thrown into painful action.

A tartar emetic plaster was at once directed to the most sensitive part, with the use of the following combination:—℞. Mass. ex. hydrarg. ʒj.; pulv. g. opii, grs. xv.; pulv. rad. ipecac. grs. x.; M. ft. pill. No. xxx. u. q. s. h. Diet to be light and nutritious, and the recumbent posture to be strictly observed.

26th. A fine crop of pustules has appeared, since which, she has been greatly relieved; the countenance has assumed a cheerful expression, and she has not been troubled with any of her usual pains or spasms; tongue is cleaning; discharges more natural; appetite good.

The pills were discontinued, and the eruption allowed to decline—

no further treatment was adopted, except to advise a careful regulation of the diet, attention to the bowels, &c.

In a few days she was attending to her accustomed duties, and has since enjoyed as good a state of health as is compatible with her arduous avocation.

CASE VII.—Jacob Clouts, an old resident in the Alms-house, was attacked 7th Mo. 13th, with violent spasmodic pain in the stomach and bowels, attended with nausea and most copious vomiting of bilious matter, with constipation of the bowels. He has been subject to similar attacks for several years, which have usually proved very obstinate, and have, on several occasions, placed his life in imminent danger; in several of these attacks which I had witnessed, the most powerful antiphlogistic and relaxing measures, (as venesection, warm bath, tartar emetic enemata, &c. &c.) had been resorted to, with a view of overcoming the spasms and constipation, without producing their ordinary effect. With a knowledge of this fact, I determined to pursue a different course. On examining the spinal column, most acute tenderness was evident between the sixth and tenth dorsal vertebræ, firm pressure producing violent pain in the stomach, with a disposition to vomit; so distressing was the sensation produced by pressure, that the patient strenuously opposed a repetition of the examination. Cups were immediately applied to the tender part; during the operation the vomiting and pain ceased, the patient became tranquil, and in a short time after the cups were removed, he fell into a refreshing sleep, which continued for several hours.

14th. Some return of pain this morning, bowels still constipated, spine tender; directed a tartar emetic plaster to the tender portion of the spine, a stimulating enema, mucilaginous diet, &c.

15th. Injection had operated freely, nausea and spasms much relieved, tartar emetic very painful.

16th. Eruption has appeared, is entirely free from pain, appetite and digestion as good as usual.

The following case of sickness of stomach occurring in a nervous female, is one of frequent occurrence, and will I think be generally found to yield to the plan here proposed, where the ordinary internal remedies have failed.

CASE VIII.—Debby Allibone has been troubled for several months with a complication of nervous symptoms, probably dependent on disorder of the uterine function. One of the most distressing accom-

paniments of her disease, is an irritable state of the stomach, producing frequent attacks of vomiting, an indisposition for food, &c. On visiting her in the evening I found that the irritability had been for several days unusually severe, resisting all the usual antacid remedies, together with stimulating applications to the epigastrium; the stomach was now so sensitive that she was unable to retain even a tea-spoonful of cool water; the case being obstinate, I was induced to examine the spinal column; on making firm pressure about the fourth dorsal vertebræ retching and nausea were immediately induced. Dry cupping was at once resorted to, with speedy relief, and to produce a more permanent impression, a blister was directed over the tender part. In the morning I found the sickness entirely relieved, vesication had been induced, and the patient informed me that she had taken a hearty breakfast without inconvenience.

The following case was kindly furnished by my friend, Dr. H. BOND; it is rendered peculiarly interesting on two accounts—first, from the prompt and striking relief of the remedies employed upon a remarkably obstinate and protracted disease; and secondly, from the circumstance of counter-irritants to the spinal column relieving an ophthalmia which had resisted all the usual remedies employed in such cases; does not this last circumstance afford some support to the opinion which I ventured to advance, while on the subject of counter-irritation over the spinal column, as applied to diseases generally?

CASE IX.—9th Month 11th, 1830.—I was called to see R. R. clerk in a counting-house, aged twenty-three years, of a light complexion, delicate form and highly nervous temperament, belonging to a family who have shown some tendency to mental alienation. He informed me that about five years since, he was severely affected with tic douloureux; and that he had been dyspeptic for the last two years, has tried every remedy he could hear of, twice consulted a very eminent physician, has taken four bottles of Swaim's panacea,* from neither of which has he been sensible of any benefit; so much discouraged was he at the ill success attending the means employed, that he had concluded to leave the disorder to take its course; but on account of a distressing vomiting I was requested to visit him; at this time he was much emaciated, weighing about ninety pounds, which he says is thirty-five or forty pounds less than his ordinary weight.

His bowels are usually torpid, and his stomach so irritable as to

* While taking the panacea, his gums became sore and tender, and nothing he said would convince him, that it did not contain mercury.

oblige him to live on a very spare diet; he has had also a slight cough of long continuance, attended with very little expectoration.

When I arrived at his lodgings this afternoon, I found that he had been vomiting frequently during the day, that he had experienced a slight rigor in the morning followed by fever, tongue covered with a thin white coat, mouth tender and breath offensive, head-ache confined to the left side, pain and tenderness in the epigastric region, pain in the left side about the sixth rib, some tenderness over the whole abdomen, feet cold and spirits dejected. Upon examining the spine, I found a very tender spot about the seventh dorsal vertebra, and on pressure, pain in the stomach and instant vomiting was induced. Directed pediluvium, anti-emetic mixture, and simple drinks in small quantities.

12th. Had a very restless night, having derived no very evident benefit from my prescription; the spine was again examined with a similar result as on the day preceding. I directed a plaster of antimon. tart. seven by two and a half inches to be applied to the spine. In the afternoon he had another slight chill and fever.

13th. Had a restless night, very little mitigation in the symptoms, except that the vomiting has ceased:—R. Sulph. quin. grs. vj.; opii pulv. gr. j. M. ft. pill. No. vj.—Take one every three hours.

14th. Plaster is acting, but not sufficiently to be removed, rested better last night, has no head-ache or sickness of the stomach, but the sight or idea of food is disgusting to him; has taken but three of the pills, having had several stools attended with griping which he attributed to them. Drink, milk and water boiled together with a small quantity of magnesia added.

15th. 9 A. M. I found him cheerful, without head-ache, and nearly free from tenderness in the epigastrium or other part of the abdomen, rested well during the night. The plaster had produced so much irritation that it was removed in the evening. To my question whether he had been able to eat any thing, he replied that he thought he had taken as much breakfast as I had, with a good relish, and without any distress, enumerating among other articles a small piece of sausage, although he had taken no animal food since April, except a small piece of boiled chicken on the 10th inst. to which he attributed the attack of vomiting.

Take three pills daily, and rub the spine twice a day with the following liniment:—R. Ol. oliva. ℥jss.; spts. tereb. ℥vj.; ol. lavend. ℥j. M. ft. liniment.

16th. Dined yesterday and to-day on beef; he continues to have an appetite which he indulges moderately with impunity. Tongue is

clean, the breath has lost its offensiveness, and the mouth much of its tenderness, bowels soluble, no return of chills, continue the liniment and take one of the following pills three times a day:—R. Sulph. quin. grs. xij.; aloes, grs. x.; opii pulv. grs. ij.; M. ft. pill. No. xij.

20th. His appetite continues good, and since the 15th nothing which he has eaten has oppressed him; tongue clean; bowels regular; no tenderness on examining the spine; is now complaining of ophthalmia, chiefly confined to the tarsus. The inflammation appeared to commence in the lids and extend to the ball, and in several days a considerable ulcer was discoverable on the cornea, equal in size to the section of a pea. This continued without any sensible improvement until the 5th of December; from the 20th of September to that time, I used every remedy that had any reputation in such cases—repeated venesection, leeching, and scarification in the early stage; blisters, caustic, purgatives, low diet, anodynes, mercury, collyria, ointments, &c. &c. and all with very little benefit; the pain in the head and breast accompanied the inflammation of the eye.

12th Month 5th.—I directed in the evening empl. tart. antimon. ten by two and a half inches, to be applied to the upper part of the spine. On the morning of the 7th, when the plaster began to draw, there was a very evident improvement in the eye. The plaster was removed on the 8th, as sufficient pustulation was produced. I find the following language in my minutes of that date. There is a truly astonishing change in the aspect and feelings of the eye since the plaster began to take effect; the redness has almost entirely disappeared; dimness is diminishing; much greater tolerance of light; and the ulcer is healing most rapidly.

12th Month 14th.—The eye has continued to improve; the dimness diminishing, and every unpleasant sensation having left it.

But within three days his appetite and strength have begun to fail, and the symptoms which afflicted him during the summer show a disposition to return. By the use of empl. tart. antimon. and other means, he was, however, so far recovered that I discontinued my visits early in January.

Another case of disease in the organ of vision fell under my notice in the Alms-house, in which counter-irritation to the upper portion of the spinal column appeared to afford relief, while similar applications in the immediate vicinity of the eye had proved unavailing.

CASE X.—Jasper Moylan, seaman, aged forty-three years, was admitted into the eye ward, 11th Mo. 7th, 1830. He was at this time labouring under a dimness of vision, amounting almost to total blind-

ness, which came on suddenly after sleeping with his face toward the sun on the deck of a vessel. The case was pronounced gutta serena, and he was repeatedly blistered to the temples and behind the ears, and moxas had been applied in the same situations, though with but little benefit to his disease. In the early part of March he fell under my care; at this time his sight was so defective that he was unable to distinguish any object clearly; the tongue was foul; bowels constipated. He was at once directed to take of mass. hydrarg. grs. v.; one pill every other night, with a gentle laxative in the morning, and a blister was applied large enough to cover the cervical vertebræ. On visiting him about twelve hours after the application of the blister, I could perceive a favourable change in his vision. The alterative treatment was continued, and the blister directed to be kept discharging.

Under this plan the sight improved rapidly, so that in a few days he could discern the figures on the yard clock, twenty or thirty yards distant from the ward; the tongue became clean, and the bowels regular.

The blister was kept discharging for several weeks, and his system invigorated by mild tonics, exercise, &c.

4th Month 8th.—Was discharged, enjoying his vision as perfect as ordinarily. I neglected to notice in this case the condition of the iris.

It may be proper to remark in this place the connexion between spinal irritation and the nervous affections of the respiratory apparatus, characterized by their spasmodic nature, and the absence of the usual evidences of inflammation, or other organic derangement, as pertussis, spasmodic cough, asthma, &c. &c.

Tenderness in the upper portion of the column is alleged by some recent authors to be a uniform attendant on these obstinate complaints, and hence they have recommended the frequent employment of local depletion, blistering, &c. to the back of the neck, as the most rational and successful mode of treating them. How far such a conclusion may be supported by facts, my own observation will not enable me to determine. Though I have seen several cases of this description materially relieved by applications addressed to the part proposed. A very interesting case was related to me by Dr. JACKSON, which offers strong support to the efficacy of such a practice; and should serve to direct our attention to an examination of the spinal column in doubtful or obstinate cases.

The patient was a young lady of delicate constitution and nervous temperament, who came under the care of Dr. Jackson during the last summer. He was informed that she had been troubled for the

last year with a dry, hacking cough, attended with dyspeptic and nervous symptoms: she was now much emaciated, and supposed by her friends to be in a confirmed consumption. The doctor was unable to discover any organic disease of the lungs, and directed some palliatives, an attention to the use of air and exercise, &c. Finding in the course of a few weeks that the symptoms became still more alarming, and not being able to discover the cause, he was induced to examine the spinal column; acute tenderness on pressure was evident from the lower cervical to the middle dorsal vertebra. The part was several times cupped, with relief to the cough and other symptoms, after which the tartar emetic eruption was induced.

While the process of pustulation was advancing, the sufferings of the patient were greatly augmented; as it declined, however, the cough ceased, the appetite became good, the general health and spirits were surprisingly improved, and in a few weeks the patient was perfectly restored to health. But little medicine was administered internally throughout the treatment; she was directed to assume the recumbent posture while the tartar emetic was acting.

HYSTERIA.—The two following cases have been selected from among many others of a less violent character, which have fallen under my notice; they will serve perhaps to illustrate the most complicated and severe form of this frightful complaint, and to evince the efficacy of the remedies employed. For Case I. I am indebted to my friend, Dr. R. D. MOORE, under whose care it occurred.

CASE I.—Mary Hall, aged twenty-three years, of intemperate habits, has been confined for the last year, with a partial paralysis of her lower extremities, together with many nervous symptoms, which occur at intervals; is subject to frequent attacks of mania, convulsions, &c. She was admitted into the Alms-house in the summer, and has since undergone a variety of medical treatment, without obtaining any permanent relief; was not sufficiently intelligent when I was called to her, to give any account of the commencement or probable cause of her disease, though it is probably dependent on uterine disorder, as she has had no menstrual discharge since admission.

12th Month 5th, 1831.—Was attacked with an unusually violent paroxysm of mania, for which she was sent to the cells; she was alternately singing, talking, and laughing in a most boisterous manner; her lower extremities were powerless, while the upper parts of the body were convulsed, the fæces were passed involuntarily, skin cold and clammy, pulse small and corded, tongue thickly coated, head hot.

Ten leeches were directed in the evening to the back of the neck, cold applications to the head, mustard plasters to the feet, and ten grains of calomel to be given at once.

6th. Calomel had operated several times, convulsions still frequent, has slept none since admission. Repeat leeching and mustard plasters, and apply dry cups from neck to sacrum—give two grains of calomel every two hours.

12 M. No improvement—apply tartar emetic plaster, three inches wide, to extend from the lower cervical to the last lumbar vertebra, repeat the leeching every morning until further directions, and continue calomel powders.

7th. More composed, slept about an hour during the night, tongue cleaning, convulsions still frequent—use frictions with the flesh brush, and continue other treatment, diet bland, but nutritious.

8th. More composed than at any time since admission, slept three hours during the night, skin, pulse, and tongue more natural, discontinue calomel, and give a dose of senna tea—plaster has produced considerable irritation.

9th. Still remains quiet—continue treatment.

10th. Has had but one convulsion for the last four hours.

11th. Slept nearly all night, having had but one convulsion, mind much more rational, plaster has been removed, having produced copious pustulation.

12th. Still improving, takes food with a relish, can move one of her toes.

13th. Slept well during the night, complains much of the eruption.

14th. Continues to improve under the treatment.

20th. Moves the feet with ease—omit the leeching.

22d. Can draw the leg upon the thigh, and is improving rapidly in strength, mind perfectly clear.

27th. Can walk across the floor without help, and states that she feels better than at any time since her admission into the house—back still sore.

1st Month 1st, 1832.—Appetite and spirits good, mind clear, is rapidly increasing in flesh and strength.

5th. Her health appears now quite established, menstruation has returned, and her appearance is totally changed; discharged from further medical treatment.

2d Month 28th. Still remains in good health.

CASE II.—Ann Divine, aged thirty years, of a delicate frame and nervous temperament, states, that about three years since, she was

attacked with a violent pain in the ball of the great toe, which gradually involved the ankles, knees, hips, arms, &c. finally attacking the muscles about the chest and face, impeding respiration and deglutition;—these symptoms existed in a greater or less degree for about twenty months, at the end of which time, the disease became concentrated about the muscles of the face, along the course of the lower jaw, in the temples and upper part of the scalp, in which situation she was liable to the most violent and repeated attacks of pain. She was now admitted into the Pennsylvania Hospital, where she remained for a year, under a great variety of medical treatment, all of which appeared to produce but little effect upon the disease, though she experienced great relief during the paroxysms, from the introduction of needles in the vicinity of painful parts. She was discharged from the Pennsylvania Hospital as an *incurable patient*, in the spring of 1829.

About two months after this period, she was admitted into the Alms-house, where she was variously treated by the different physicians in attendance for several months, without experiencing any permanent benefit.

12th Mo. 16th, 1830.—Came under the care of Dr. E. F. RIVINUS and myself; she was now a complete martyr to suffering, and had given up all hope of restoration. She had been under no medical treatment for several weeks. Her jaws were so firmly locked, from the contraction of the adjoining muscles, that she was unable to masticate, and was obliged to subsist on fluid aliment; her paroxysms of pain were still frequent, and so violent as to convulse the whole body. On examining closely in reference to the catamenia, it was found that the discharge was regular, though depraved and deficient in quality, and that the neuralgic pains increased as the “period” approached: the spinal column was found tender throughout its whole course, and quite sensitive towards the union of the lumbar vertebræ with the sacrum. Under these circumstances, we concluded to treat the case as one of hysteria, as laid down by Tate. A mercurial purgative was administered, which operated freely, after which the following was directed, with a view of acting on the uterine functions.—R. Pulv. gum. aloes, grs. xxiv.; carb. ferri, ℥ss.; ol. menth. pip. gtt. iii.; M. ft. pill. No. xij. One to be taken three times daily; a hip bath was also directed to be taken every night, and continued until the next menstrual period. The ungt. tart. antimon. ℥ij. to ℥j. of cerat. simp. to be rubbed down the spine from neck to sacrum every four hours, until an eruption should be induced.

12th Mo. 23d. A copious pustulation, and the patient expresses herself

as much relieved; the jaws are more pliable, and her "constant pains," as she terms them, are much diminished.

- 27th. Is still improving, is able to eat animal food without inconvenience, though she is obliged to be slow and cautious in mastication; spirits much improved.

30th. Feels her constant pains daily diminishing; continue treatment.

1st Mo. 2d, 1831.—Had a paroxysm of pain, which was much shorter and less severe than usual.

3d. Feels as well as before the paroxysm; eruption declining in some places; directed the further application of the ointment.

14th. Has been steadily improving until last night, when she had a severe convulsion, which was attended with but little pain, except in the back, which is very thickly covered with pustules. I believe the attack was referable to this cause.

21st. Has been advancing since the 14th; eruption still pretty copious.

25th. Improving daily—left her in charge of Drs. KEITH and MEAD, who continued the same treatment, until we had the satisfaction of finding that a healthy menstruation was established, from which time her health and spirits were reinstated, she was able to take exercise in the open air, her pains gradually left her, and she was discharged 7th Mo. 27th, 1831, after a most suffering confinement of nearly four years.

I have frequently seen her since she left the house, and find that she has had no return of this distressing complaint, and though her constitution still remains delicate, she is able to perform the duties of a domestic, to the satisfaction of her employers.

In reviewing all the information now before the profession on the connexion of spinal irritation with nervous diseases, it may perhaps be summarily stated—

First. That tenderness on pressure in some portion of the spinal column is an attendant on many chronic neuralgic affections, and that by relieving it in the manner proposed, these complaints are either entirely eradicated, or temporarily suspended.

And secondly. That the precise indications, which this circumstance affords, are not sufficiently well understood at the present time, to justify the establishment of any definite pathological principles applicable to the whole class of neuroses.

The subject certainly offers the highest inducements for further investigation, whether considered in its pathological or practical application.

Philadelphia, 1832.